

ABSTRACT OF THE DISCLOSURE

A wireless local area network (LAN) adapter (20) that optimizes the length of message packets, for example according to the IEEE 802.11 standard, and in an environment having interfering transmissions (BL1 et seq.), is disclosed. The disclosed adapter (20) executes an adaptive process by way of which an adjustment to the packet length is derived based upon rate measures for the most recent two trial packet lengths. The rate measure corresponds to a packet success rate for that packet length, determined either from an estimating function or by actual measurements, multiplied by a ratio of the data portion of each packet to a total packet length including interpacket spacing. Upon convergence as the adjustment becomes smaller, the optimized packet length for best data rate given the present interference. A method of determining the need for packet length optimization is also disclosed, in which the actual packet error rate is compared against an expected packet error rate based upon signal-to-noise ratios.